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CASES IN COUNTRY PRACTICE.

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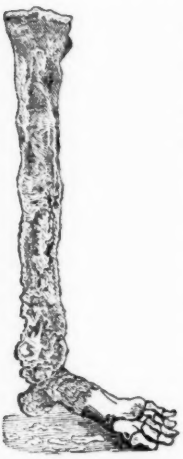
No. V.—DISEASE OF THE BONES OF THE LEG AND FOOT.

On the 14th day of September, 1861, J. G. T., a young man of about 26 years of age, presented himself at my office, having extensive disease of the bones of the left leg. From the knee to the ankle there were everywhere fistulous openings, which led down to dead bone, and from which, as he said, "several pieces of bone had come away, from time to time." The ankle-joint seemed completely anchylosed. The patient was evidently very much run down by the exhaustive discharge, having well-marked hectic symptoms, with night sweats, &c. In view of the extensive nature of the disease, and the feeble state of the patient, it seemed to me that amputation promised more than any conservative operation. The proximity of the disease to the knee decided me to go above that joint.

The patient was put upon a tonic and alterative treatment, with generous diet. I operated upon him about a month after I first saw him, when I judged him to be in a fit condition. The amputation was done by the circular method, in the usual way. The first incision, however, was made a little lower than I have commonly seen done, sweeping over the lower point of the patella, so as to save the integuments of the knee-joint, with the idea that this part of the skin of the leg being made, by nature, more extensible than the rest, and better fitted to sustain pressure, would be well adapted for the covering of the stump. An examination of the limb, after its removal, revealed more extensive disease than had been supposed by any one to exist, and the bones of the leg and foot, nicely prepared and mounted upon a stand, make as good a pathological specimen as I have ever seen of the kind. A large photograph of the parts was taken, which shows exceedingly well some points to which I should like to call attention. The subjoined wood-cut, though somewhat rude and imperfect, must here suffice for illustration.

There was no fistulous opening leading to the knee-joint, and no appearance of disease showed itself there or below the ankle-joint; yet the head of the tibia and all its articular surface were found soft and spongy, and the os calcis and all the tarsal bones in the same diseased condition. The proximal heads of the metatarsal bones were carious, but the remaining portions healthy, and with the phalanges are shown white and sound in the cut. The internal malleolus remains in the form of a delicate ring, the whole central portion being eaten out. The fibula (not shown here) is firmly united to the tarsus, and what remains of the bones about the ankle-joint is in one piece. There is an evident natural effort to make the fibula supply the place of the diseased and weakened tibia, as bone is thrown out from it as though to fill the inter-osseous space and increase its power to support the weight of the body. The specimen shows the effects of both caries and necrosis. Yet both these diseases are so common in the practice of every surgeon, and the amphitheatre of any hospital furnishes so many specimens of bone affected by them, that I should not have deemed this case worthy of record but that the amount of disease was shown after amputation to have been so much greater than would at first sight have been supposed. The foot *looked* well enough, and there never had been any symptom to call attention to the knee joint, though there was a fistulous opening pretty near it. Under these circumstances, with a healthy fibula, why might not a surgeon have been tempted to remove the diseased portion of tibia, and thus avoid amputation? I am not sure that had not the patient's general health appeared to me such as to forbid any such attempt, I might not have thought of it. Dissection shows that any such procedure could only have resulted in bitter disappointment to both operator and patient.



I am glad to add, in conclusion, that the young man is now healthy and well. He recovered without a bad symptom, has regained his flesh and strength, and the stump looks as though it would be good and serviceable.

Bibliographical Notices.

Health: its Friends and its Foes. By R. D. Mussey, M.D., LL.D., Late Professor of Anatomy and Surgery at Dartmouth College, N. H., and of Surgery in the Medical College of Ohio; Fellow of the American Academy of Arts and Sciences, &c. &c. Boston: Gould & Lincoln. 1862. 12mo. Pp. 368.

The heading of the 23d chapter of this work is: "My own Experience." We had, long before reaching this last but two chapters of the

volume, given to it this same title. Is it not the record of the experience of a life which was—which is—and which, beyond 80 years, still promises to be? The author has had experience, fair experience, of the various modes of living or of sustaining life. Thus, he drank alcohol in its various forms, or disguises, when it was deemed hospitable to offer them, in the forenoon, for instance, as well as at dinner; and harder, when it was discourteous to decline them. He had his fifteen-gallon barrel of strong beer in his cellar when a teacher in a country medical school. He was in no sense an *outsider*, one of the most perilous positions for a man beginning life—that is, when it proclaims itself from the house-top, and rejoices in martyrdom if it only be noisy. Our author tried the beer, and the rum and water, with a little sugar to help it over the unaccustomed tongue—and wines of various vintages, but one after another of which he gave up, as they not only did him no good, but much harm.

The following extract from Chapter XXIII. is in too close connection with our author's personal physical history to be omitted:—

"I was born on the 23d of June, 1780, in Rockingham County, New Hampshire. From my father, a country physician of respectable standing for his time, I inherited a dyspeptic stomach. He had a small farm, and the family were trained upon a mixed diet, such as was common among the cultivators of the soil in that neighborhood. Our bread was made chiefly of a mixture of rye flour and Indian corn meal, and fermented. Wheaten bread was a rare article with us, as the soil of our region was less adapted to the cultivation of wheat than the other grains. When milk was scarce, we often had bean porridge for breakfast and supper, and sometimes the rare treat of chocolate for breakfast. All along in my boyhood, I was subject to headache, with a sensation of burning at the pit of the stomach. The headache and burning were aggravated after meals. When I was in college, and afterwards, during my professional study, being provided at the boarding-houses with wheaten bread (and coffee and tea not strong enough to do much harm), I found my stomach and head less troublesome, although by no means exempt from the occasional recurrence of the symptoms mentioned."—P. 339.

Such is the key-note of our author's life and mode of living.

The question arises, how far was this physical life the consequence of hereditary idiosyncrasy as a remote cause, and the direct product or result of the youthful dietary? One can hardly believe that such could have been the food of any respectable physician's family, at any time of our history. But the time was not favorable to a very refined *cuisine*, it being about the middle of the revolution, and it may represent country living at all times. We do know that to this day our rural districts, especially the remoter, live quite as plainly—that is the word—as did their forefathers and foremothers. Meat—as salt pork and salt beef—forms a more frequent article at all meals than seems to have been the case in our author's family. The hard-working farmers and their families of the country are better able to dispose of their rough fare than are children, and comparatively sedentary men; and their children live through such fare by virtue of their inherited vigorous organizations, and the rough and tumble discipline of their earlier days of self-motion. The children are sent to school for a few months a year only, and often have a walk of a mile or more to reach it. A very good elementary education is got in this way, and additions are easily made if desired.

Our author, after a careful study of the effects of food and drink upon himself, gave up the use of all forms of alcohol, and of animal

food. He became satisfied that for him, however his physical antagonism to such articles of diet had become his portion, total abstinence was not only temperance, but the only means or condition of health or life. The question arose, "if such excellent consequences have followed in my own case from this mode of living, may they not be alike useful to others?" As a physician in very large and general practice, he had opportunities of putting this question practically, and the answers were satisfactory to him. His book is rich in illustrative and sustaining facts. He found that alcoholic drinks, which in popular opinion have become celebrated for their curative agency in pulmonary consumption, produce only temporary benefit. There may be increase of strength, and even of flesh. But these are temporary changes of condition only, which in a few months give place to what existed before. The strength fails, the flesh disappears, the cough returns, and death may happen sooner than if the disease had not been suspended by whiskey. Our author prefers vegetable and mineral tonics and stimulants to any form of alcohol; and this whether such remedies are demanded by chronic debility, simply, or for that condition which sometimes follows acute disease, in which convalescence is not progressive, but halts, as if about to give birth to morbid processes which may result in incurable disease.

Our author assumes vegetarianism to be the natural state of man in Paradise, or vegetables to be his natural food. First, on the authority of Genesis; second, on the form and adaptation of the organs employed in preparing the food for digestion and nutrition.

"No intimation was given that animal flesh should form any part of his food. It was not till after the flood that permission was given to eat flesh. . . . . Now why was this permission given, if it was not fitting that it should have been granted in Paradise? We know of no reason except that assigned by our Saviour in reference to the Mosaic permission for men to put away their wives; it was because of the hardness of their hearts."—Pp. 177, 178.

Many questions arise. Whence came the *hardness?* or, whence the *permission?* There was an organic law determining the diet in Paradise—organization obeying that law, or made in harmony with it. Did the *permission* to change the diet override both organs and laws, or was the organization modified? Second:

"The whole alimentary apparatus in man and the orangs is strikingly alike. . . . . If a mixed diet induces disease and shortens life in the quadrumana, should we not look for a similar effect from it in man? What was an orang, a chimpanzee, or a gorilla made for? In reply it may be asked, for what more probably than to present to man a standing attestation to the truth and the value of the dietetic lessons given him in Paradise; to demonstrate to him that an animal with an organization like his own in relation to food, may subsist exclusively on the eatables granted to himself in Eden, and yet enjoy enduring health and an adequate amount of activity and strength."—P. 175.

> There are more things in heaven and earth, Horatio,
> Than are dreamt of in your philosophy.

Final causes have always seemed to us the most embarrassing subject in our philosophy. It is a labyrinth into which he who enters has little more to do than to try to get out—having this thought ever pressing itself upon him, that the farther he goes on, the less is his progress.

Our author cites Cuvier, who says that "apes are the only quadrumana in which the hyoid bone, the liver and the cæcum exactly resemble those parts in man"; Mr. Lawrence, that the structure of the

whole alimentary canal is very much alike in man and the monkey kind. The orangs have the appendix vermiformis, which the others have not. The inference is that in all the immediate instruments of digestion the human structure closely resembles that of the simiæ, all of which in their natural state are completely herbivorous—ergo. But Prof. Meyer has done more, for he has discovered "that in all the vegetable-eating tribes the anterior tubercula quadrigemina are larger than the posterior, while in the flesh-eaters the posterior are the larger. In man the anterior, as is well known, are larger than the posterior."—Pp. 176, 177. The office of these tubercula, so extraordinarily rendered in the vernacular, is at length discovered. But, the why?

In the 25th and last chapter, our author treats of the length of life. Notice is taken of the operation of hygienic agencies in prolonging life—as air, light, exercise, clothing, bland and unirritating food, and "a drink made in Paradise, made right at first, neither requiring nor admitting of narcotic or alcoholic admixtures."—P. 361. To the meek, inquiring mind, questions may arise as to the precise nature of this drink made in Paradise—what it was, if it may be found, and where. Our author alludes to the great age of men and women before the flood, and its probable causes. It is commonly believed that life was then more youthful and perfect; that these men were giants, of incredible strength, and a most astonishing duration of life—that Adam was 900 yards in height, and lived about 1000 years. But a wiser philosophy explains the old history of human monstrosities. Hensler has proved, with the highest probability, that the year, till the time of Abraham, consisted only of three months—that it was then extended to eight, and not till the time of Joseph did it consist of twelve. Some eastern nations to this day reckon three months to the year. In Abraham's time, the year was eight months. He lived, according to Jewish history, 175 years; Isaac, 180; Jacob, only 147; Ishmael, a warrior, 137. Sarah, the only woman of the ancient world who told her age—all others agreeing with modern ladies in reticency on this very delicate subject—lived 127 years; Joseph, 110. Moses, who complains that man's life is only three score and ten, lived to 120. Looking at all these facts—and what facts more interesting—the age of Methuselah is reduced to 200 years; not very much exceeding the ages of Jenkins and Parr. Our author's inference that the shortness of life now may have much to do with our food and drink, would seem to be somewhat disturbed by the revelations of modern *research*, or history, which the latter word in its original means.

We have read our author's work with much pleasure. It is earnest, having great plainness of speech, which in such books is true eloquence—and to the author's mind, is the authoritative power of truth. It is personal experience, strengthened by the relative, making, to the author's conviction, an appeal to all men which may not be resisted. If there be egotism in a system which has its corner-stone in personal experience, is not this much lessened by correlative experience—the egotist being lost in the author, and especially when the object is to make the world wiser, happier, better? This volume presents several and various aspects. One is its philosophy, or the substitution of facts for fiction. Second, theory, or schemes, or plans lying in the mind, but which, however honestly there, are to become philosophy before they can command assent. Third, practice—the application of principles to practical, every-day life. This last is the **hardest office of the teacher, both in regard to himself and his disciples.**

"If to do were as easy as to know what were good to do, chapels had been churches, and poor men's cottages princes' palaces. It is a good divine that follows his own instructions. I can easier teach twenty what were good to be done, than be one of the twenty to follow mine own teaching."

So spake the great master of the human heart and human mind. Our author is a *good divine*. He has achieved a Herculean labor. He has *followed his own instructions*. It will be no fault of his if those he would teach prefer their own dinners and breakfasts and suppers to his. And they must not complain if they do not, on their feed, get beyond 80, as he has—write as pleasant and useful a book as he has, or deserve as well of posterity as he does.

Reports of Medical Societies.

EXTRACTS FROM THE RECORDS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT. BY FRANCIS MINOT, M.D., SECRETARY.

JUNE 9th.—*Gun-shot Wounds.*—Dr. WARREN reported the following cases which had lately come under his care.

I.—*Bullet split by coming in contact with Bone.*—An occurrence very common with the ordinary spherical bullet, is to split on coming in contact with bone. The following interesting case occurred at the battle of Bull Run:—Lieut. Burd, of the 4th Maine Reg., a gentleman who before the war had distinguished himself by some discoveries in telegraphic communication, was struck on the left side of the os frontis with a round ball, and was supposed by his comrades to be mortally wounded. He was made prisoner, and taken to Richmond. A projection was felt under the scalp, about four inches from the wound in the integuments, and an incision made over it, from which half of the bullet, with a highly polished cut surface, was removed. He remained seven months a prisoner at Richmond, during which time the wound in his forehead continued open, and suppurated freely. He was troubled with some uneasiness in the head, and by occasional headache. On his arrival at Fortress Monroe, after his release, this discharge still continuing, the wound was examined by Dr. Cuyler, U. S. Army, the distinguished surgeon at that post, who, on investigation, discovered a metallic substance deep in the wound. This was skilfully extracted, and, as the patient states, a small portion of brain escaped at the time. On examination, the extracted body proved to be the other half of the ball, flattened on both sides, and having imbedded in it a portion of the skull. On the next day, a piece of the inner table of the skull, which had been driven before the ball into the brain, was also extracted. After removing these substances, the wound healed.

The patient afterwards came under Dr. Warren's observation, and remained for some time in delicate health.*

Dr. Fox, of the Naval Hospital at Chelsea, showed Dr. W. a case in which a ball penetrated in the middle of the arm, and was cut out over the scapula. In its passage it struck the edge of the scapula, cutting the ball nearly in halves, and flattening it out in this position.*

* The ball was exhibited to the Society.

In almost every instance that Dr. W. had met with, when the round ball encountered bone, it was either flattened, or if it met the edge of a bone, as of the jaw, or rib, it was cut in halves.

II.—*Gun-shot Wound in the Neck.*—At the battle of Bull Run, a man was struck in the neck, just behind the angle of the jaw, over the point of bifurcation of the carotid artery. The shot being fired from below, the ball penetrated in an upward direction, and struck the edge of the jaw, and was cut in two by it, a portion of the bullet remaining in the neck. The other, a larger part, passed through the base of the tongue, and carried away a portion of the alveolar process of the upper jaw, escaping through the cheek. The hæmorrhage from the wound was at first rather profuse, but was checked by pressure with a handkerchief, and did not recur. The wounds healed kindly, but an abscess formed in the neck, which was opened, and portions of lead and spicula of bone were removed from it. After one or two abscesses of this kind had formed, he recovered.

III.—*Gun-shot Wound in the Leg.*—A man, 27 years of age, was hit by a bullet on the inside of the left leg, about its middle. The ball passed through the tibia, producing a compound fracture of the bone. The fracture united after a very long time, as also the wound of entrance. The wound of exit, however, remained open, and when Dr. Warren saw him, eight months after the reception of the injury, was of the size of a half dollar, and had an unhealthy look, resembling ephithelial cancer. The edges of the wound had already been dissected up, in the hope of relieving tension, and producing a healthy state of the wound. Dr. W. determined to dissect out the entire ulcer, which was done. In the centre of the wound, and between the bones, a black substance was discovered in an encysted state. This was at first thought to be powder, but was afterwards explained by the patient stating that, when in Richmond, on account of a sloughy condition of the wound he had been in the habit of sprinkling it with charcoal, some of the granules of which had been covered up, and retained there. The wound, after the operation, took on a healthy action, and is now well.

IV.—*Gun-shot Wound through the Os Calcis.*—The following case exemplifies the very slow way in which wounds of a spongy bone take on the healing process. Richard Roe, a private in the 1st Reg. Mass. Volunteers, was struck by a ball in the left heel, the ball passing round the os calcis, and coming out on the other side. The enemy were firing up from a hill, a little below. Shortly afterwards he exposed the other foot, when another ball struck him in exactly the same spot on that foot, passing through the os calcis. He was carried a prisoner to Richmond, where he was under the care of Dr. Charles Bell Gibson, of the Confederate Army. Inflammation was so extensive, and the pain so severe, that he at one time requested Dr. Gibson to amputate the foot, which he very properly declined to do. The patient came under the care of Dr. W. about six months afterwards, having regained his liberty. On probing the wound, Dr. Warren discovered a large bit of detached bone. The wound was enlarged, and a portion of bone the size of a chestnut removed, and the bone, which was rough in one place, made smooth. After this, the wound gradually healed, so that at one time he could use the foot in walking. It then became inflamed, and again began to discharge. Dr. W. advised him to enter the Hospital two months after the first operation. The

bone was now exposed by a large incision, and the whole interior of the cavity excavated with a chisel and drill. The mouth of the aperture in the bone was made much wider than the interior. In April, 1862, nearly nine months after the accident, the wound was again nearly healed, but still painful if he attempted to walk upon it, and it was difficult to say whether he would recover without the removal of the whole bone. The rest of the foot was in a perfectly healthy state. At the present moment, June, 1862, the wound has contracted to a small point, there is a serous exudation from it, and he is able to walk about on it.

V.—*Gun-shot Wound in the Thigh—no trace of the Ball at first to be discovered.*—Major S., while gallantly commanding at the head of his regiment at the battle of Newbern, received a ball in the upper, and front part of the thigh, about two inches below Poupart's ligament. The whole regiment, at the time, were in the advance and were exposed in an open field, in a reclining position, firing on the enemy, who, in return, were firing down upon them from breast-works. He felt a blow on the leg as if from a stone, and was not aware that he was wounded, until, on removing his coat, he saw the blood flowing freely. He went on giving his orders until he became faint, and was taken to the rear. The wound being probed by the surgeon, was found to extend in a direction downwards and inwards for three or four inches. The ball could not be found in the wound, nor could any trace of it be detected elsewhere. The only sensation he felt, in addition to a general want of power in the limb, was that of slight numbness in the calf of the leg, and a soreness in the foot. Perfect rest of the limb was enjoined upon him, and shortly afterwards he was brought home in a transport vessel with other wounded soldiers. Dr. Warren saw him in company with his physician, Dr. Charles Gordon, about three weeks after the date of the injury. An excavated ulcer, of the size of a quarter of a dollar, marked the situation of the entrance of the ball. Underneath it, in the cellular membrane, was a deposit of lymph, which, on being moved to and fro over the muscles, gave at first the sensation of the presence of a ball at that spot. A small pin-hole in the centre, from which issued a serous fluid, at first seemed to confirm this view; the history of the wound, however, was opposed to it. A probe being gently pressed into the opening, encountered no foreign substance. The patient, being of fine physical development, and quite free from fat, the contour of the various muscles was strongly marked. A careful examination was now made of the whole limb, commencing at the toes and going up to the groin, making such manipulations as to leave no one of the muscles or intermuscular spaces unexplored. Not the slightest pain could be produced or induration felt, to mark the presence of the concealed bullet. Finding no trace of the ball, it was decided to allow the patient to use the limb. On first making an attempt to stand, he found much difficulty in doing so, both from the stiffness of the wound and from the disuse of the limb, but being supported by two persons, and making an effort, he was gradually enabled to move around the room. Dr. W. advised a continuance of this exercise, in order that he might regain, as soon as possible, the power of the muscles, and with the hope that the muscular action would bring the ball from its hiding place. This proved to be the case, for in about a couple of weeks a hard movable substance, which felt like half a sphere, was found travelling up the

limb. The bullet, it was hoped, would follow up the track of the wound: but it was soon discovered that it was very movable, quite under the rectus muscle, and could not be distinguished at all when this muscle was contracted. After arriving under the old wound, it was thought possible that it might rest there; but it was found that its disposition was upward, towards the groin. Major S. being very desirous to get rid of it, and rejoin his regiment, decided to have it removed.

The ether being given, the patient was placed on a table, with the light from above, and an incision was made through the skin, cellular membrane and fascia, and the muscle uncovered. No cicatrix could be found further, as a guide. The ball was now fixed by an aid, and the muscle carefully cut through, a vessel that ran across it being tied, so as to prevent any deep-seated effusion of blood. The ball, from its constant disposition to change its position for an inch or more, caused some embarrassment. The ball was felt to be resting on the bone. It was now fixed by two fingers in the deep wound, and the muscular fibres over it cut, and its blue color was seen through its delicate investing sac. It was necessary to divide this in several directions before it could be pushed out with a director. It was a round bullet, flattened on one side, as if it had struck the bone and then glanced down the limb. The bone, not denuded, could be felt beneath. The wound was brought together by adhesive straps, and a cold-water dressing placed over it. The most rigid quiet of the limb was enjoined. The limb on the following day was sore and swollen, and on the fourth day an absess formed in the situation of the sac which contained the bullet, and discharged itself through the wound. By continued rest of the limb, and absence of muscular motion, any effusion of pus under the muscle was prevented. The patient is now rapidly recovering.

In the present instance, and in one or two similar ones, no tenderness in the track of the ball pointed out the course which it had taken, and this fact is important, as the want of sensibility in the track taken by it is occasionally given as an argument that it has not entered at all. As before stated, a pain was felt in the calf of the leg, at the time the wound was received, also a numbness of the foot, and soreness about the ankle. The former disappeared after a time, but the soreness of the ankle continued until the extraction of the ball.

VI.—*Gun-shot Wound from a Conical Bullet in the Calf of the Leg, carrying in the Clothes.*—Lieut. C., of the 2d Mass., whose Regiment had fought during the whole day, as rear guard in retreat, the day before the battle of Winchester, and probably saved the army, arrived in front of that place at 12 o'clock at night, having marched 35 miles without food, their drink being the muddy water of the roadside. Lieut. C. had charge of the picket guard for the night. At 4 o'clock in the morning the battle commenced, and lasted four hours, when finding themselves in danger of being surrounded, the order for retreat was given. The Regiment formed in regular marching order, and marched down the hill into Winchester, regardless of the enemy in full pursuit, who were firing into them. Lieut. C. was in command of the rear Company, in fact the last person bringing up the rear. He received at this time a shot in the gastrocnemius muscle, the sensation of which was as of a violent blow with a club, which knocked him down. He attempted to rise, but after stumbling a few steps, fell

headlong. By this time, fortunately, the Sergeant of his Company perceived his situation, and being a man of great size and strength, took him in his arms, carried him about two hundred yards into the streets of Winchester, and deposited him in the only ambulance wagon that happened to be there. A number of other wounded men were also put into the same wagon, some of them lying upon him. He contrived to put his head out of the front of the vehicle, so as to get air, and in this position, with a man lying on his wounded leg, remained until they arrived in Williamsport, on the following morning, some 16 or 24 hours. He was so completely pinned to the spot, that he was unable to sheathe his sword, which lay drawn by his side, just as he was placed with it in the ambulance.

On the passage through Winchester, a torpedo, apparently thrown at the ambulance, and which if it had penetrated, would have destroyed all the wounded within, struck the head of a man with his arm in a sling, and having hold of the shaft, within two feet of Lieut. C., blew it to atoms, scattering his brains over the wagon. A woman also fired a shot out of a window at them. After passing through the town, they still remained a mark for the enemy's bullets, but very shortly the further pursuit appears to have been stopped. Late at night the ambulance arrived near the borders of the Potomac, where a great rush of wagons was attempting to cross the river. The wounded would have remained in this position the whole night, the frightened wagoners absolutely refusing to move, had it not been for the untiring energy of Gen. Banks, who passed the whole night on the right bank, superintending the passage of the troops, and who ordered off the wagons and passed the wounded across. On the afternoon of the following day Lieut. C. had his wound examined. It was found that the ball had penetrated at the outer and upper part of the left leg, going through the belly of the gastrocnemius muscle, lying down in the vicinity of the great vessels, and its course stopped by the bone. It had carried in with it a patch of the trowsers and the drawers, which were of thick knit woolen, without tearing them. From the swelling of the wound the whole of this plug, nearly as large as the cork of a quart bottle, had been completely wedged into it, so as only to be withdrawn by free incisions. The wound remained quite painful for a few days, until suppuration had commenced, and now, after the lapse of a month, is slowly healing, and the patient getting about on crutches. The leg is somewhat bent, and cannot easily be placed on the floor on account of the contraction of the injured muscle.

The case is given somewhat in detail, to show to what extent the soldier is exposed, independently of the danger from his wounds. That a young man, scarcely 18, should be able to march 35 miles with his regiment, constantly fighting, and without food, keep guard all night, and engage in a battle lasting four hours the next morning, be wounded, and while suffering and bleeding lie 36 hours with a man on his swollen limb, and nothing to sustain him, except on the second day a swallow of whiskey given by a woman who saw his head hanging out from the ambulance with his pale and fainting appearance, shows how much the human frame will bear when assisted by spirit and determination.

VII.—*Comminuted Fracture of the Elbow Joint; Excision.*—A man, 25 years of age, entered the hospital a week after the battle in front of Richmond, having received a ball directly through the elbow joint.

There was no great pain nor irritation about the wound, not much, if any, suppuration, and his appetite was good. The wound of exit was the same as the wound of entrance. The only application had been cold water. As the wound was offensive, a poultice was applied. In a few days some irritation was manifested, and a number of bits of bone were removed. In another week, the pain coming on again, with inflammatory symptoms, the patient was etherized to allow of a more full investigation, which could not be supported without. It was now found that all the bones composing the elbow were broken, the condyles being loose, and the fracture extending quite up the arm. The two wounds were now connected by an incision across the back part of the joint, and the elbow joint excised, comprising, at least, three inches of the humerus.

VIII.—*Bullet Wound in Leg, leaving no trace of its Course.*—Gen. D. was wounded in the battle before Richmond, by a ball which struck him on the outer side of the tibia. A probe penetrated about an inch. The bone was denuded, but no soreness indicating the track which the bullet could have taken down the leg was to be discovered.

IX.—*Bullet Lost in the Leg.*—A man entered the hospital who the day before had received a wound in the upper part of the calf of the leg, from a gun in the hands of a comrade. It had been probed for some depth, but no ball found. It had disappeared in the direction of the foot, where a shock was felt, as if it was paralyzed, at the time. No trace of the ball could be found, and no soreness of the limb except at the orifice of the wound. He was discharged, able to walk well, the third day.

X.—*Wound in Chest from Grape Shot.*—A man, 28 years of age, was brought into the Hospital on account of a wound in the thorax received a week before at the battle of Newbern. The ball, which was an iron one, weighing six and a half ounces, struck him as he was in a stooping position, in the left axilla, wounding the fleshy part of the arm, which was in contact with the side. It forced in the ribs, probably ran between the skin and the parietes of the thorax, and made its appearance under the skin of the sternum, where it was cut out. The ribs were broken at this spot at their junction with the sternum. The lungs were wounded, and he expectorated blood. In what manner the wound in the lungs was produced, it was impossible to say—whether by the ball, or the fractured ribs. When he entered the hospital, no tenderness or ocular appearance indicated the track of the ball, so that it could not be said whether it had gone through the chest, or had run along on the outside of the ribs. The wound in the axilla healed rapidly, that on the sternum very slowly. There was no fistulous opening left, and no discharge of bone. The patient recovered slowly, his principal symptom being great debility.

XI.—*Bullet in Pelvis.*—J. Y., aged 18, received two balls at the battle of Williamsburg. One struck him on the upper and back part of the left arm, and went behind the bone, coming out in front of the chest. The other entered an inch above a line drawn midway between the trochanter major and middle of the sacrum, in the left hip, and disappeared there. He was disabled, though not in great pain at first. A week after, he was seized with the most excruciating pain in the course of the sciatic nerve of that side. He was taken to Baltimore, from which place he was brought on to Boston by steamboat and railroad, being carried always in his father's arms, to lessen the jar from

the motion of travel. I saw him about ten days after the reception of the wound. His left limb was drawn up, and he could not make the slightest movement, without severe pain. A probe passed into the wound penetrated three inches, when a hard substance was encountered. Whether it was bone, or the bullet crushed against the bone, could not be determined. The following day I had him removed to the hospital, and made an exploratory examination under ether. The external wound being enlarged, the finger passed through the gluteus maximus, under which was a cavity. Still farther on, through a narrow space, the pelvis was reached, and a smooth opening which appeared to be the sciatic notch. On the inner side of the notch was a hole, through which the ball had penetrated into the pelvis, the spicula of bone lying loose in the neighborhood of the sciatic nerve. These were removed. Another smooth cavity, which would hold an ounce of fluid, had been formed under the deep muscles. A probe passed easily two-thirds through the pelvic cavity without encountering the ball. Water dressings, and a poultice afterwards, were put on the wound, and the patient is much relieved by the operation. The principal cause of irritation appeared to be the fragments of bone lying on the great nerve. The situation of the ball does not appear.

XII. *Bullet Lodged in the Corpus Cavernosum.*—Dr. Warren said he was invited by his friend Dr. Fox, Surgeon of the Naval Hospital at Chelsea, to see the following interesting case and operation. On 30th May, 1862, a man, about 30 years of age, while engaged in a boating party during our late fight in Florida, was fired upon by a party from shore. One bullet passed through the left leg near the calf, and was cut out on the opposite side. Another struck him at the outer and upper part of the same limb, passed through the thigh, emerging near the root of the scrotum in the fold of the thigh. It then entered again near the same spot, where it disappeared, and he heard nothing farther from it for the time. The accident took place about the middle of April. He returned home, and came under the charge of Dr. Fox. Latterly the ball was discovered at the root of the penis in the corpus cavernosum of the left side, from which place it has gradually worked over to the right. The man has had no difficulty in urinating, and no pains during erection. The point of the bullet, which was a Minié one, was towards the body. It was firmly held by the fingers, and then cut down upon. The skin was first divided, then the strong fibrous covering of the carvernous body, and although the incision was quite free, the foreign substance resisted the use of ordinary forceps, the elastic force and suction of some of the tissues operating to prevent its extraction. The wound being now held well open, a pair of bullet forceps were introduced, and the ball slowly extracted as if from a bed of India rubber. There was no violent rush of blood from the erectile tissue, but a slow-continued discharge as from a large vein. This was controlled by means of a sponge, and bandage. A gradual suppuration, with apparent elimination of the sac formed around or pushed before the foreign body, followed, and the patient is now recovering in the most satisfactory manner. The case is interesting from its rarity, and for the practical facts which it teaches in regard to the danger from interference with the erectile tissue, which at first would appear likely to be more considerable.

XIII.—*Molar Tooth lodged in the Tongue.*—A man, about 20 years of age, entered the Hospital about ten days after the battle of Wil-

liamsburgh, having received a wound from a bullet which struck the right side of the lower jaw, and passed out through the upper lip. The jaw was shattered, and when he entered the Hospital, there were purulent deposits connecting with the neck externally and the mouth internally. The patient was etherized, and the wound being explored, bits of bone were found everywhere buried in the substance of the cheek and the surrounding soft parts. These were extracted, and the wound healed rapidly. Some weeks afterwards, he presented himself at the Hospital with a swelling in the tongue, the edge of which had been wounded by the bullet, and which, until lately, he had been unable to protrude. On examination, a hard body was found imbedded in the substance of the organ, which on being cut upon, proved to be a molar tooth which had been knocked out of the jaw and buried in the tongue.

XIV.—*Extraction of Bullets.*—Dr. Macleod, in his valuable notes on the Surgery of the war in the Crimea, makes the following remarks on the Extraction of Balls, which we may be pardoned for appending. "Few questions connected with gun-shot wounds have given rise to so much discussion and diversity of opinion as that with reference to the *extraction of balls.*" . . . . . "If we examine into the opinion of surgeons on this point, we find that nearly all those who look on the extraction of the ball as a secondary point, are civilians; while military surgeons place great weight upon its accomplishment. The true way of putting the question is, not whether balls may remain in the body without causing annoyance, but whether they do so in so large a number of cases as to warrant non-interference." . . . . "In this country we have not many opportunities of obtaining extensive information on the point as connected with the subsequent history of men with balls remaining unextracted, but such information is supplied from the Hôtel des Invalids of France, by M. Huntin, the Chief Surgeon to that magnificent establishment. He tells us, that while four thousand cases had been examined by him in five years, only twelve men presented themselves, who suffered no inconvenience from unextracted balls; and the wounds of two hundred continued to open and close till the foreign body had been removed." "Before a ball becomes encysted, it may set up grave inflammation which will mat together and embarrass parts; press upon bone, and perhaps cause exfoliation; ulcerate bloodvessels, and so irritate nerves as to occasion affections as severe and fatal in their results as tetanus. It is somewhat remarkable that in the wounded who came under my care, two died of tetanus, in the very small number of instances—four or five at most—in which I could not find the ball. If this was a mere coincidence, it is the more curious. Gravitation, and muscular motion, may so change the position of a ball, that from a harmless site, it may be removed to one of much danger. It may thus work into a cavity, and cause fatal results." "It seems, then, the teaching of experience, as it is of common sense, that whether the question be viewed as one bearing immediately, or remotely on the result—on the *cure* of the patient, in the proper acceptation of the term—we should, as soon as practicable, ascertain the position of the ball, and remove it, along with any other foreign body which may have been introduced with it, always supposing that by such a proceeding we do not cause more serious mischief than experience shows the presence and after effects of the ball can produce."

Army Medical Intelligence.

SAVAGE'S STATION HOSPITAL, June 21, 1862.

To the Surgeon General.

DEAR SIR,—Yesterday we sent off all the patients from this Hospital, in order to have it clear as a depot for the wounded in the impending battle, the forerunners of which we hourly hear in the scattered thunders along different parts of the lines, shelling the rebels out of the woods in order to advance still nearer to the holy Mecca of the Southern Confederacy, as well as gather from daily balloon ascensions high above the sacred groves of Virginia. We had over three thousand (out of about seven thousand killed and wounded at Seven Pines) pass through our hands at this place. More than half of the balls extracted by me (and I had charge of the principal operating tent, with a corps of surgeons to assist) were round; but the buck-shot, three of which I believe are always attached to each ball, seldom pierced the skin. After so much has been said, I need not refer to the straight line which the conical ball *usually* takes, the fearful destruction and shattering of the bone as well as tearing of the soft parts, nor to the meandering course of the round ball and the ease with which a bone will turn it aside without breaking. We used nothing but conical balls, and know how much greater must have been the mortality among the rebel wounded than among our own. I assisted a South Carolina surgeon in taking care of about thirty wounded prisoners. I found only one ball in them; the rest all went straight through. This one was shot in the fore-arm, near the elbow, the ball passing down and wedging itself fast between the lower extremities of the radius and ulna, so that it required great force to extract it, as well as judicious management.

But I found several of our men only slightly wounded, and some not at all even, by their conical balls, owing either to inferior powder, or long range, the ball having first passed through a small tree, hitting something on their person, or from some other cause to me unknown. The trees on some parts of the field are hit all over, from the ground to seven or eight feet up, and several three or four inches in diameter were felled by musket balls alone. Several patients brought to me were saved by sheet-iron vests, one by a small, round, tin-cased mirror in his vest watch-pocket. I showed him that he was unhurt, when to his great joy he straightened up, looked for a moment, seized his sword, and in a minute more was flying to his regiment, which was then in the hottest of the fight. This was also a round ball, and he thought surely he was shot through the chest. I had another to-day, 5th Michigan, on picket, shot by a conical ball in the belt plate, carrying away a large portion of the U. S., but it was able to glance it from his body, though it went afterwards through his arm about three inches below his elbow.

And this reminds me of some cases to illustrate the all-absorbing interest which men take in a fight or on picket, especially in the murderous, barbarous manner in which picketing is here done. Another man, belonging to the same regiment (5th Michigan), was brought in at the same time. He says that when his comrade abovementioned, fell (for it knocked the breath out of him for the moment), he retired behind a tree for safety and to wait his chance to send the enemy a similar message, not having the least idea that he was hurt. He had

lain there some time, watching with eagle eye, when he felt something running down the front of his body, and on opening his vest, for the first time, found that he had three buck-shot just above his heart, and the ball itself had cut a gash an inch and a half long and over half an inch broad, on his left breast. Several other cases of a much severer character have been related to me by the wounded, where they knew nothing of it at the time, and but for the multitudes which were poured in upon us, preventing all conversation, I have no doubt I could have collected scores.

This all-absorbing interest was also remarkably illustrated by the ease with which I was able to perform almost all sorts of operations while the tide of battle was flowing nearer and nearer, without the use of any anæsthetics whatever, and without any complaint from the wounded, thus enabling me to relieve twice the number and more. And here let me observe, that æther is entirely unfit for the battle-field, causing me great delay for some hours during which I was obliged to use it; and though my chloroform was administered often by those unused to its application, no accident occurred. So that while I would use only æther in private practice, I would likewise use only chloroform in war. We expected every moment during Saturday afternoon, May 31st, to be taken prisoners, as the fearful din came closer and closer, and our brave battalions retired towards us before the overwhelming force brought against them; yet no surgeon left his post, nor would, I believe, under any circumstances whatever. I amputated a man's arm above the elbow, struck by a shell not five rods from my tent, and brought in to me by Dr. Munroe, Senior, of Massachusetts, who I am happy to inform you showed himself most worthy of your confidence by his skill and activity.

I cannot pass unnoticed the indefatigable exertions and able management of Dr. —— Mileau, Med. Director of 3d *Corps d'Armée*, and Dr. Frank H. Hamilton, Medical Director of 4th Cook's (those two doing almost all the fighting), both before, during, and since the battle, a battle which by far surpasses in amount of casualties those of Alma or Inkerman; yet, with much less medical force, the wounded were much better cared for than in those veteran armies, if we take their own accounts.

I performed several exsections of joints, including shoulder, knee and elbow, as well as the shafts of bones; but I fear this sort of operation is, and will be carried to excess under the circumstances. Of course it was imperative to send off the men as soon as they were properly dressed, so that only in a few cases can we know the result of our operations. But I have heard of one of mine which causes me great pain. He was a staff officer (a most brave and noble fellow), shot through the middle of the outer side of the leg, fracturing the fibula into several small bits for the space of about two inches, the ball lodging against the tibia without injuring it. I extracted the broken bone and ball easily through the bullet hole, and told him to get to his home (New York) as soon as possible, promising him a good leg, of which I had little doubt, while he expressed his gratitude by giving me his horse and equipments. But I now learn that in just a week after, his leg was amputated above the knee (with good reason, I hope), and he died in less than an hour. It did not enter into my thoughts to amputate that leg, nor would it under like circumstances again; yet if, at the time, it was amputated with good

reason, what must happen to those who I am informed have had even six inches of the femur removed?

My heart was made sick by repeated amputations, yet I must say that I have very little faith in some of the fancy exsections I have heard of here, when the patients must be transported for hundreds of miles, and suffer repeated changes of medical officers and nurses.

In regard to the health of the army, I think it good, all things considered. I have reference more particularly to the 3d and 4th corps, with which I am well acquainted, and which from doing almost all the work in the recent battle, as well as living on the battle-field ever since, and in a swamp at that, must be in a worse sanitary condition than any other, as the rest of the army occupy much better camping ground, and have had no fight. I counted fifty-seven horses dead within a few rods of each other. No mounted man lived long, so accurate were the sharp-shooters on either side. All the horses were burned, and the dead buried, still the atmosphere is most offensive. But encamping on the battle-field is of course a military necessity, and there seems but little doubt that the next great battle will begin at the same point, though we hope the tide will roll towards Richmond. A man has been engaged to purify the ground, and I hope he commenced yesterday. After all, there are but about fifteen per cent. off duty, nearly all of which are kept with and near their regiments, to aid in the great struggle which at any moment may come. The Massachusetts Regiments average as well as any, and the 9th seems to be very remarkable and perhaps the healthiest regiment in the army. The Colonel (Cass) I understand is a most strict disciplinarian.

There is but little of chills and fever, though many of the regiments lost everything but their guns and ammunition in the last struggle, a loss not yet repaired. The great trouble seems to be colds, diarrhœas and some typhoid fever. I am sorry to add that several cases of scurvy have of late made their appearance, mostly from one or two regiments. I saw but one at the White House Hospital, and that was slight.

There were brilliant bayonet charges in the late battle, but of course you will not be surprised to learn that we had no *bayonet* wounds to dress, the rebels running too fast to hit or be hit in that way.

I hope, if the public interest will permit, you will not fail to come out so as to be present at the next battle, as you could not only be of great service, but it is something not likely to occur again in our time. The best have to rough it at times, but as Æneas said to his men, "perhaps hereafter it will delight us to remember these days." For instance, I worked with all my might from 2 P. M. (May 31st) to 2 A. M., doing all sorts of operations by candle light, and then could get nothing to eat but McClellan pies (as they here call ship-bread) and cold water. My room in Savage's house I found filled with wounded, my blanket gone, and I had to lie in a potato field with no ends to the tent, where the fearful rain of that night drenched me both above and below. The next morning I had to wash in the muddy brook without soap or towel.

I would be the last to complain in case of forced marches of any amount of suffering; but as we are situated, comparatively stationary, and with steam and rail connection from the very centre of the army to all the great cities of the North, I must say, that I think we ought to be kept free of scurvy. Yet when we informed the authorities of

the appearance of this fearful malady, and were told that we could have potatoes *ad libitum*, it was found that there was a supply for only five days. After all, the sanitary condition of the army does not call for those loud complaints made in some quarters, and every soldier feels that he has a country that will do its best for his health and comfort. The army is now pretty well purged of the cowards and grumblers, and when the word, which all so anxiously wait, is given, "On to Richmond," I am confident every man will do his duty.

I have the honor to be your obedient servant,

WM. H. PAGE, *Volunteer Surgeon.*

REPORT OF DR. W. E. COALE.

To the Surgeon-General. BALTIMORE, JULY 2d, 1862.

DEAR SIR,—I have to report that I arrived here yesterday P. M., and, upon immediate inquiry, found there was no vessel "up," either at Fortress Monroe or here, for Newbern. Not wishing to waste time, I went this A. M. to Washington, and saw the Surgeon-General, Dr. Hammond, and represented to him my inability, for want of means of transportation, to start for Newbern for five days or more. He said that rumors had already placed the wounded, on the Peninsula, at some four thousand, and that there was urgent necessity in that quarter for all medical men that could be gotten. I showed him my paper from you, which he endorsed—"In consequence of the great need for the services of medical men at Fortress Monroe, I have requested Dr. Coale to report for duty at that station." In compliance with this, I start with the Surgeon-General and his staff by to-morrow's (the first) boat for that destination. My next report, I trust, will be of service done, or in person with the wounded of the 9th and 22d Mass., both of which were in the thick of the fight.

I am, Sir, respectfully, your obed't serv't,

WM. ED. COALE, M.D.

In an Appendix to the above, Dr. C. suggests the following mode of preparing cushions or pillows for supporting wounded limbs, stumps, &c.

Clean bullocks' intestines carefully; cut them into different lengths, from 12 to 24 inches, and select the intestines of different sizes. Salt them down. When wanted for actual use, wash the piece, and tie up one end of it; turn it wrong side or inside out, on a stick or with the fingers; pour into it about one ounce of solution of chloride of lime, chloride of soda, or of any other disinfectant; blow it up, but not too full; tie the other end; slip it into a pillow-case of proper size, and you have a pillow, light, cheap, filled with the most elastic substance known, and that never loses its elasticity; and for purposes of transportation, one thousand of them can be packed in one half-barrel.

The covering or case for these cushions might be left open at each end, so as to slip off more readily.

The following surgeons left Boston on Monday, for Harrison's Landing, and service in Gen. M'Clellan's army.

Dr. Wm. Knight, Marlboro'; Dr. R. Cresson Stiles, Pittsfield; Dr. L. T. Lock, Nashua, N. H.; Dr. Wm. R. Rice, So. Boston; Dr. P. H. Hurd, Charlestown; Dr. J. E. Whiting, Charlestown.

THE BOSTON MEDICAL AND SURGICAL JOURNAL.

BOSTON: THURSDAY, JULY 10, 1862.

THE recent passage of the bill increasing the number of surgeons in the army, by which each regiment is provided with an additional assistant-surgeon, we regard as one of the most important measures of the war, and shows that the government is at last awake to the duties and responsibilities involved in the present struggle. It has long been a matter of surprise that, in this sanguinary contest, and exposed as the army must almost of necessity be, to the pestiferous influences of a malarious country, so slender a medical force should have been supplied. Had this humane measure been adopted in the outset, we should have had far less to record of the suffering and the loss of life which mark the present conflict as one of the most destructive in the annals of war. We can only attribute what at first appears the result of unpardonable neglect, to the fact that, owing to the long period of military inaction, the nation found itself unprepared at once to meet all the requirements which modern warfare imperatively demanded; for it must be remembered that while we have been quietly slumbering in the arms of peace, military science has been steadily advancing, more especially since the bloody campaigns of Italy and the Crimea, with which may be said to have dawned a new era in the history of war, an era inaugurated by the Minié rifle, and that terrible engine, the rifled cannon.

The carnage caused by these more modern instruments of warfare as compared with the results of battles of an earlier date, seems almost incredible. We are told that, at the battle of Salamanca, but one ball in three thousand, fired by the British, took effect. It is also stated that eighty thousand rounds of ball cartridge were fired from the old musket, at Caffraria, and only twenty-five Caffres were known to be hit; while at Cawnpore one company of soldiers, armed with the Enfield rifle, brought down 69 out of a body of horsemen by whom they were attacked, at one discharge. The terrible carnage at Solferino, at Pittsburg Landing, and in the more recent battles before Richmond, afford still further evidence of the increased destructiveness to life of modern modes of warfare. These facts become important, says Mr. Longmore, in his admirable little treatise on gun-shot wounds, "in estimating the amount of surgical attendance that is required in modern engagements." The increased velocity of the projectile used, the greater accuracy of aim, and the peculiar shape of the balls, by which a far more serious wound is inflicted, combine to render modern warfare vastly more terrible in its effects, than ever before, and therefore demanding a proportionate increase in the amount of surgical aid in the field. Whether by the present bill the increase of the medical force is sufficient to meet the exigency, remains to be seen; we shall be surprised if a still further increase may not ultimately prove necessary.

DEATH OF MR. WAKLEY.—One of the June numbers of the *Lancet* chronicles the death of Mr. Wakley, the founder of that able Journal. He died of consumption, at the age of 67, after a life of unwearied

labor in the cause of medical reform; and it may be said, that to him, more than to any one else, does modern medical Journalism owe much that distinguishes it. Mr. Wakley did not confine himself to the rectification of medical abuses. He was a prominent member of the House of Commons, and here, besides defending and upholding, on all occasions, the rights of his medical brethren, he was "determined in his exposure of all popular abuses, and still more in his championship of the neglected poor." "In addition," says the *Lancet*, "to other services that Mr. Wakley rendered to the profession, may be mentioned the part he took in establishing a system of clinical teaching in London. Previous to the appearance of that journal, clinical teaching was unknown. He was the first to publish reports of the proceedings of the various medical societies. This course met with strenuous and long-continued opposition, and it required years of resolute perseverance to bring this kind of reporting to anything like perfection. It is now an important element in professional instruction. Mr. Wakley was always the defender and upholder of the rights and privileges of the surgeons of the united services, and of the Poor-law medical officers. He lent his aid effectually to the reform of the laws affecting lunatics. His name is associated with most of those proceedings which had reference to the welfare of the great body of surgeons in general practice."

He had, for some years previous to his death, abandoned his editorial labors, never, however, failing "in jealous regard and affection for the" journal, which has, for many years, exercised so powerful an influence in the medical world. The memory of such a man as Mr. Wakley will long be cherished as the most successful medical reformer of the age.

The American Journal of Ophthalmology.—We have received the first number of this new Journal, which, from the growing importance of this branch of medicine, and the great advances that have recently taken place in the diagnosis and treatment of diseases of the eye, will be a valuable addition to our literature on this subject. It is edited by Dr. Julius Homberger, and, from the whole character and appearance of the first issue, deserves a success, which, we fear, in the present state of things, will hardly be reaped.

Illness of our Army Correspondents. — We learn from a private source that Professor James Bryan, whose letters from the army have been so acceptable to the readers of the Journal, was brought to his home in Philadelphia, some weeks since, suffering severely from an attack of bilious remittent fever.

A private letter from Binghamton, N. Y., dated July 5th, informs us that Dr. George B. Willson, late Assistant Surgeon of the 3d Regiment, Michigan Infantry, and who has also contributed for our pages much interesting information connected with medical matters in the army, after a long course of illness has been invalided and was then on his way home to Port Huron in Michigan. An aggravation of his disease, we regret to learn, had detained him a few days in Binghamton.

Ventilation of Hospitals.—General Morin has addressed an interesting paper to the French Academy of Sciences on the subject of ventilation in hospitals and other establishments where many persons are

congregated together. After various theoretical considerations, our author remarks that the system of ventilation at present in use may be reduced to two kinds, viz.: that which determines a draught in an upward direction by a fire lighted at the top of the edifice—and that which places the fire in the cellars to produce a draught in the opposite direction. General Morin recommends a third system between the two, which consists in keeping up a fire on a level with the floor of the room to be ventilated. Experiments prove that an upward draught is the most unfavorable of the three, the quantity of air thus evacuated being inferior to that carried off under other systems. The latter are much on a par as regards the effect produced, but the third deserves the preference on account of its cheapness and simplicity. The author, in examining the question of the introduction of pure warm air into a room, finds that the supply under the ordinary system is inferior to the quantity evacuated, a defect which he proposes to obviate by enlarging the orifices of the stoves destined to furnish it. The Hopital Lariboissière has a peculiar system which produces good effects. It consists of eight pavilions, of three stories each, every story containing a sick-ward with 22 beds, and a small room with two beds. The vitiated air is carried off on each floor by nineteen evacuation flues, which unite into one in the garrets, where a draught is obtained by a large vessel containing hot water. The quantity of foul air thus evacuated in a second is about one cubic metre and one fifth —but a greater result might be attained were the circulation less complicated, since the unevenness of the surface of the flues, a circumstance, the effects of which can hardly be attenuated except by a diminution of length, causes a loss of velocity of more than one-seventh.—*Brit. Amer. Med. Journal.*

APPOINTMENTS.—The Senate has confirmed the following Assistant Surgeons as Surgeons in regular promotion. Jonathan Letterman, Pennsylvania; Robert O. Abbott, Pennsylvania; Thomas M. Getty, Virginia; David L. Magruder, Virginia; Wm. J. H. White, District of Columbia; John J. Milhau, New York; Horace R. Wirtz, Pennsylvania; Chas. Page, Virginia; Chas. Sutherland, Pennsylvania; Basil Norris, Maryland.

VITAL STATISTICS OF BOSTON.

FOR THE WEEK ENDING SATURDAY, JULY 5TH, 1862.

DEATHS.

	Males.	*Females*	*Total.*
Deaths during the week,	26	33	59
Average Mortality of the corresponding weeks of the ten years, 1851-1861,	35.2	28.9	64.1
Average corrected to increased population,	..	..	71.67
Deaths of persons above 90,	..	..	..

Mortality from Prevailing Diseases.

Phthisis.	Chol. Inf.	Croup.	Scar. Fev.	Pneumonia.	Variola.	Dysentery.	Typ. Fev.	Diphtheria.
10	1	1	6	4	1	0	0	0

PAMPHLETS RECEVIED.—Caries of Elbow Joint, Operation of Excision, with Recovery of Useful Arm. By N. C. Husted, M.D., New York City.—Malignant Pustule in the United States. By A. N. Bell, A.M., M.D., Physician to Brooklyn (N.Y.) City Hospital, &c.—The Domain of Medical Police. By Louis Elsberg, M.A., M.D.

DEATHS IN BOSTON for the week ending Saturday noon, July 5th, 59. Males, 26—Females, 33.—Asthma, 1—disease of the bladder, 1—congestion of the brain, 2—disease of the brain, 2—inflammation of the brain, 1—bronchitis, 1—burns, 1—cancer (of the breast), 1—cholera infantum, 1—cholera morbus, 1—consumption, 10—convulsions, 2—croup, 1—dropsy of the brain, 3—drowned, 1—epilepsy, 2—scarlet fever, 6—gastritis, 1—disease of the heart, 1—infantile disease, 1—intemperance, 1—congestion of the lungs, 1—inflammation of the lungs, 4—marasmus, 1—measles, 2—old age, 1—paralysis, 2—scrofula 1—smallpox, 1—tumor, 1—unknown, 4.

Under 5 years of age, 26—between 5 and 20 years, 4—between 20 and 40 years, 14—between 40 and 60 years, 11—above 60 years, 4. Born in the United States, 41—Ireland, 15—other places, 3.